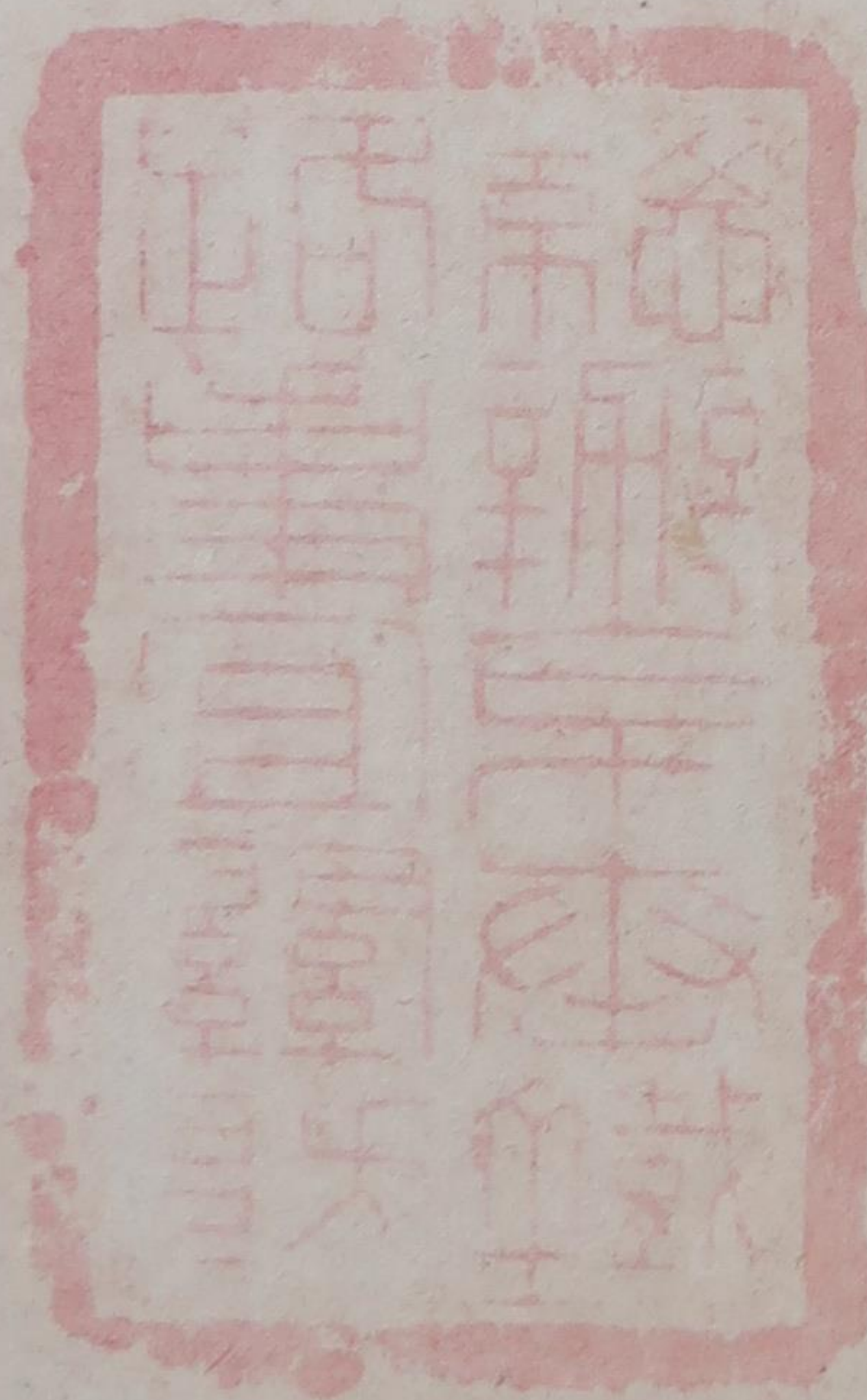


# Imperial Railways of North China.

Report for the Year ended 31st December, 1911.

Published for circulation by order of the Directors.

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# Imperial Railways of North China.

## GENERAL REPORT.

The Directors submit the following report of the working of the railway during 1911. The year was one of grave vicissitudes and the operations were carried out under extremely difficult conditions. Early in the month of January, pneumonic plague broke out in Manchuria and rapidly assumed serious proportions. It was responsible for thousands of deaths and in order to prevent, as much as possible, dissemination of the disease over the wide districts served by our line, all transportation of passengers from Mukden and Outside Wall stations was stopped, for a time, and subsequently only recommenced under quarantine regulations. The summer floods caused much damage and in certain parts famine relief had to be organised by the Government. In the closing months of the year, the revolution, which broke out at Wuchang, made great demands on the traffic facilities of this line for speedy transportation of large bodies of troops and military equipment and, in the opinion of those competent to judge, the operations, though of great magnitude, were efficiently and promptly performed. In spite of these difficulties the earnings have been well maintained.

The results of the Year, compared with 1910, are as follows:—

	Year ended 31st December.	
	1910	1911
	\$	\$
Earnings . . . . .	10,928,242.31	11,668,627.89
Expenditure . . . . .	3,474,187.35	3,651,132.53
Balance after paying Working Expenses.	\$ 7,454,054.96	8,017,495.36
Ratio of Working Expenses to Earnings	31.7%	31.3%

**Mileage**—There has been no change in the number of miles of main line open to traffic.

**Loans**—The Imperial Chinese Railways 5% Gold Loan of 1899 was reduced on 1st August, 1911, by the amount of the Seventh Drawing of £ 57,500. to £ 1,897,500.

The half yearly payments to the South Manchuria Railway in reduction of their Gold Loan have also been duly met.

**Exchange**—The monthly remittances to London for repayment of Loan Capital and Loan Interest were made at the average rate of 2/6½ per Tientsin Tael.

**Staff**—The Directors take this opportunity of thanking the Staff for their co-operation throughout the year.

Li Tsoi Chee, *Managing Director*

Shu Yin Chi, *Director*



# IMPERIAL RAILWAYS OF NORTH CHINA.

## STATEMENT OF ACCOUNTS

FOR THE YEAR ENDED 31st DECEMBER, 1911.

### No. 1 Capital Authorised and Created.

DETAILS	Capital Authorised			Capital Created			Balance		
	Stock and Shares	Loans	Total	Stock and Shares	Loans	Total	Stock and Shares	Loans	Total
Imperial Chinese Government and Chinese Shareholders . . . . .	\$ 21,994,428.57	\$ —	\$ 21,994,428.57	\$ 21,994,428.57	\$ —	\$ 21,994,428.57	\$	\$	\$
Under Loan Agreement 1899, £ 2,300,000 . . . . .	—	27,600,000.00	27,600,000.00	—	27,600,000.00	27,600,000.00			
Under Japanese Loan Agreements, South Manchuria Rly. Loan, 1909, Gold Yen 320,000 . . . . .	—	377,142.86	377,142.86	—	377,142.86	377,142.86			
	\$ 21,994,428.57	27,977,142.86	49,971,571.43	21,994,428.57	27,977,142.86	49,971,571.43			

### No. 2 Stock and Share Capital Created Showing Proportion Issued.

	Amount Created	Amount Issued	Amount Unissued
Imperial Chinese Government and Chinese Shareholders . . . . .	\$ 21,994,428.57	\$ 21,994,428.57	—
	\$ 21,994,428.57	21,994,428.57	—

### No. 3 Capital Raised by Debenture Stock.

		\$
<b>Imperial Chinese 5% Railway Loan, 1899</b> (original amount of Loan £ 2,300,000).		
Existing at 31st December, 1910 . . . . .	£ 1,955,000	23,460,000
Bonds of Seventh Drawing paid off . . . . .	57,500	690,000
Existing at 31st December, 1911 . . . . .	£ 1,897,500	22,770,000
Of which there was invested in the Hongkong & Shanghai Bank, London, at 31st December, 1910 . . . . .	£ 150,663.10.2	1,807,962.10
Less Withdrawals . . . . .	65,412. 9.5	784,949.62
Leaving invested in the Hongkong & Shanghai Bank, London, at 31st December, 1911 . . . . .	£ 85,251. 0.9	1,023,012.48
<b>South Manchuria Railway Loan, 1909</b> (original amount of Loan G. Yen 320,000.00).		
Existing at 31st December, 1911 . . . . .	G. Yen 284,444.48	

### No. 4

### Receipts and Expenditure on Capital Account.

Dr.				Cr.			
	Total to 31st Dec. 1910	Amount expended in Year 1911	Total to 31st Dec. 1911		Total to 31st Dec. 1910	During Year 1911	Total to 31st Dec. 1911
	\$	\$	\$		\$	\$	\$
<b>To Expenditure</b>				<b>By Receipts</b>			
Lines open for Traffic . . . . .	47,245,485.01	—	47,245,485.01	Shares . . . . .	21,994,428.57	—	21,994,428.57
Authorised by High Court of Chancery . . . . .	1,139,123.98	710,587.40	1,849,711.38	Debenture Stock . . . . .	27,600,000.00	—	27,600,000.00
New Steamer . . . . .	264,000.00	72,475.78	336,475.78	South Manchuria Rly. Loan	377,142.86	—	377,142.86
	\$ 48,648,608.99	783,063.18	49,431,672.17				
<b>Balance . . . . .</b>			539,899.26				
		\$ 49,971,571.43					\$ 49,971,571.43

### No. 5

### Details of Expenditure on Capital Account.

	\$
Land and Earthworks . . . . .	30,510.51
Rolling Stock . . . . .	192,405.54
Tongshan Works . . . . .	42,538.65
Shanhaikwan Bridge Works . . . . .	10,323.11
New Head Office Buildings . . . . .	98,472.02
Stations and Yards . . . . .	176,869.63
Bridges . . . . .	111,351.56
Staff Quarters . . . . .	32,126.41
Miscellaneous . . . . .	15,989.97
	\$ 710,587.40

### No. 6

### Expenditure on Capital Works paid for from Revenue.

	\$
<b>Betterments.</b>	
Railway Extension to Mukden City . . . . .	80,384.98
Expended during Current Year . . . . .	80,384.98
Expended in Previous Years . . . . .	8,903,585.29
	\$ 8,983,970.27







# D. Traffic Expenses.

Year ending 31st December, 1910										Year ending 31st December, 1911	
\$	\$									\$	\$
82,719.87										95,290.63	
307,844.40										223,268.12	
60,716.99										62,180.45	
46,349.06										57,836.35	
										26.89	
6,431.58										7,022.85	
	404,661.40										445,025.36
		General Superintendence									
		Wages of Station Staff									
		Wages of Train Staff									
		Lighting and Small Stores									
		Wagon Covers, Ropes, etc.									
		Station Fittings and Furniture									

# E. General Charges.

Year ending 31st December, 1910										Year ending 31st December, 1911	
\$	\$									\$	\$
274,834.46										250,502.31	
66,519.92										68,106.96	
91,352.71										77,064.89	
45,497.97										100,957.40	
10,005.70										11,287.52	
106,371.81										111,765.52	
117,156.81										151,989.01	
68,708.51										58,157.73	
2,659.57										3,874.42	
54,627.89										35,639.47	
897,735.35										869,345.23	
Cr. 181,939.41										Cr. 222,950.14	
	655,795.94										646,395.09
		General Superintendence									
		Accountant's Department									
		Stores Department									
		Medical Department									
		Rents of Buildings and Lands									
		Police									
		Telegraph Department									
		Stationery and Printing									
		Compensation									
		Sundries									
		Interest, &c.									

# EARNINGS.

Year ending 31st December, 1910										Year ending 31st December, 1911	
\$	\$									\$	\$
5,141,402.40										4,396,997.08	
5,394,226.01										5,931,056.62	
29,215.33										53,082.51	
244,098.76										399,094.18	
119,209.75										948,387.50	
	10,928,242.31										11,688,627.89
		Passengers									
		Goods									
		Military Traffic									
		Miscellaneous Receipts									
		Chinese Government Traffic									

# AUDITOR'S CERTIFICATE.

The accounts for the year ended 31st December, 1911, as stated, contain, in my opinion, a full and true statement of the financial condition of the Railway, and the revenue has, in my judgment, been charged with all expenses which ought to be paid thereout. The interest and redemption of the Loan during the year have been fully met.

Tientsin, 11th March, 1912.

A. F. Algie,  
*Auditor.*

# ENGINEER-IN-CHIEF'S CERTIFICATE.

I hereby certify that the Permanent Way, Bridges, Stations and other Buildings have been maintained in good order during the year 1911.

Tientsin, 9th March, 1912.

D. Poyntz Ricketts,  
*Engineer-in-Chief.*

# LOCOMOTIVE SUPERINTENDENT'S CERTIFICATE.

I hereby certify that Plant, Engines, Machinery and Tools have been maintained in good repair. After the outbreak of the revolution the coaches and cars suffered considerable damage in the conveyance of Imperial troops. A large number of cars on foreign lines are still unaccounted for.

Tongshan, 31st December, 1911.

F. A. Jamieson,  
*Locomotive Superintendent.*



# REPORT ON PERMANENT WAY DEPARTMENT.

Miles of Main Line Track			
Miles of Sidings, permanent	147.644	605.760	Miles
temporary	7.780		
		Total	155.424 "
Increase of Main Line			
Increase of Sidings, permanent	3.597	2.960	"
temporary	5.566		
		Total	7.163 "

198,067 New Sleepers put in for Maintenance.

14 Old Section 60 lb. Rails changed.

16 New Section 60 lb. Rails changed.

5-85 lb. Rails changed.

1 Japanese Rail changed.

0.97 Mile of Old Section 60 lb. rails in sidings have been replaced by New Section 60 lb.

0.35 mile of 45 lb. rails in sidings have been replaced by Old Section 60 lb.

14,101 fangs of Ballast for Maintenance.

9,937 fangs of Ballast for New Work.

3,059 Floor Ties renewed.

## New Works Completed:—

Additional Ramp to Tientsin East footbridge.  
Footbridge of two 69 feet spans with 5 ramps at Tientsin Central.  
Bridge No. 20a. 4 spans 10 feet reinforced concrete slab top.  
Bridge No. 34a. 4 spans 10 feet reinforced concrete slab top.  
Bridge No. 34b. 4 spans 10 feet reinforced concrete slab top.  
Bridge No. 55. raised 3'6".  
Bridge No. 56. 10 new 30 feet spans added, and raised 6'0".  
Bridge No. 57. raised 6'0".  
Bridge No. 65. extended 2-20 feet spans.  
Bridge No. 66. extended 3-20 feet spans.

13,835 fangs of Rubble used for protective work:—

(a) For maintenance . . . . . 6,694 fangs

(b) For new work . . . . . 7,141 fangs

48,063 fangs of Earthwork executed:—

(a) For new work . . . . . 40,139 fangs

(b) For repairs . . . . . 7,924 fangs

## Platforms Extended:—

Paotungssu, 100 feet run masonry wall.  
Lienshan, 600 feet for Hulutao Junction.

## New Buildings Erected:—

Tientsin City Station.		
Two open steel waiting sheds with galvanized covering	8,475	square feet
Tongshan.		
Weighbridge	784	do
Store for electric fittings	1,092	do
Store lean-to on engine shed	438	do
Additional room, Traffic Inspector's quarters	289	do
Two open wooden waiting sheds with galvanized covering	6,869	do
Hsukochuang (near).		
Two platelayer's houses	840	do
Hanku.		
Bridge watchman's hut	156	do
Peitang.		
Police quarters	640	do
Tangku.		
Additional room engineer's quarters	470	do
Tientsin.		
Police quarters	2,535	do
Waiting room	2,485	do
Tientsin City Station.		
Administration Offices	32,478	do
Electric power house and quarters	2,587	do
Stable and quarters for Head Office Staff	3,861	do
Two signal cabins	624	do
Addition to police quarters	665	do
Hsiku.		
Platelayer's cabin	404	do
Chienmen.		
Electric power house	1,757	do
Locomotive Staff quarters	1,297	do
Shanhaikwan.		
Plague huts	4,735	do
Coolies quarters	13,154	do
Kitchens for above	1,683	do
Medical Officers quarters	1,638	do
Kitchens for Bridge Works Manager	410	do
Weighbridge house	168	do
Shahousu.		
Station Staff quarters	2,796	do
Chinchow.		
Weighbridge house	168	do
Shuangyangtien.		
Police quarters	450	do
Yangchuantzu.		
Police quarters	450	do
Kaopantzu.		
Loco quarters	2,750	do
Plague huts	2,880	do
Lichiawopu.		
Weighbridge house	168	do
Hsinminfu.		
Weighbridge house	168	do
Police quarters	2,052	do
Traffic quarters	7,560	do
Latrine	294	do
Chuliuhu.		
Engineer's office	737	do
Clerk's quarters	1,094	do



## REPORT ON PERMANENT WAY DEPARTMENT.

Miles of Main Line Track . . . . .		605.760 Miles
Miles of Sidings, permanent . . . . .	147.644	
temporary . . . . .	7.780	
Total . . . . .	155.424	"
Increase of Main Line . . . . .		2.960 "
Increase of Sidings, permanent . . . . .	3.597	
temporary . . . . .	5.566	
Total . . . . .	7.163	"

198,067 New Sleepers put in for Maintenance.  
 14 Old Section 60 lb. Rails changed.  
 16 New Section 60 lb. Rails changed.  
 5—85 lb. Rails changed.  
 1 Japanese Rail changed.  
 0.97 Mile of Old Section 60 lb. rails in sidings have been replaced by New Section 60 lb.  
 0.35 mile of 45 lb. rails in sidings have been replaced by Old Section 60 lb.  
 14,101 fangs of Ballast for Maintenance.  
 9,937 fangs of Ballast for New Work.  
 3,059 Floor Ties renewed.

### New Works Completed:—

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 13,835 fangs of Rubble used for protective work:—  
 (a) For maintenance . . . . . 6,694 fangs  
 (b) For new work . . . . . 7,141 fangs  
 48,063 fangs of Earthwork executed:—  
 (a) For new work . . . . . 40,139 fangs  
 (b) For repairs . . . . . 7,924 fangs

### Platforms Extended:—

Paotungssu, 100 feet run masonry wall.  
 Lienshan, 600 feet for Hulutao Junction.

### New Buildings Erected:—

Tientsin City Station.		
Two open steel waiting sheds with galvanized covering . . . . .	8,475 square feet	
Tongshan.		
Weighbridge . . . . .	784	do
Store for electric fittings . . . . .	1,092	do
Store lean-to on engine shed . . . . .	438	do
Additional room, Traffic Inspector's quarters . . . . .	289	do
Two open wooden waiting sheds with galvanized covering . . . . .	6,869	do
Hsukochuang (near).		
Two platelayer's houses . . . . .	840	do
Hanku.		
Bridge watchman's hut . . . . .	156	do
Peitang.		
Police quarters . . . . .	640	do
Tanekun.		
rs . . . . .	470	do
. . . . .	2,535	do
. . . . .	2,485	do
. . . . .	32,478	do
. . . . .	2,587	do
ee Staff . . . . .	3,861	do
. . . . .	624	do
. . . . .	665	do
. . . . .	404	do
. . . . .	1,757	do
. . . . .	1,297	do
. . . . .	4,735	do
. . . . .	13,154	do
. . . . .	1,683	do
. . . . .	1,638	do
ger . . . . .	410	do
. . . . .	168	do
. . . . .	2,796	do
. . . . .	168	do
. . . . .	450	do
. . . . .	450	do
Loco quarters . . . . .		
Plague huts . . . . .	2,750	do
Lichiauwopu.	2,880	do
Weighbridge house . . . . .	168	do
Hsinminfu.		
Weighbridge house . . . . .	168	do
Police quarters . . . . .	2,052	do
Traffic quarters . . . . .	7,560	do
Latrine . . . . .	294	do
Chuliuhu.		
Engineer's office . . . . .	737	do
Clerk's quarters . . . . .	1,094	do



**New Buildings Erected (continued).**

Tawa.		
Weighbridge house . . . . .	130	square feet.
Police quarters . . . . .	450	do
Huchiwopu.		
Police quarters . . . . .	450	do
Suichunghsien.		
Weighbridge house . . . . .	168	do
Chinchow.		
Locomotive School . . . . .	729	do
Hsinlungtien.		
Station latrine . . . . .	263	do
Additional Locomotive staff quarters . . . . .	1,678	do
Mukden City.		
Temporary station building . . . . .	2,124	do
Platelayer's cabin . . . . .	416	do
Total . . . . .	118,509	square feet

Turntable put in.

    Lienshan. 53 feet Turntable put in for Hulutao Junction.

Signals Erected.

    Tongshan. Two shunting signals in Locomotive Yard.

    Tientsin City Station. Main Line and connecting rods all interlocked and signalling East cabin 24 levers (4 spare), West 30 levers (8 spare).

**Heavy Works Executed:—**

    Tientsin City Station. New Administration Offices.

    Plague camps at Shanhaikwan, Kaopantzu and Yingkow.

    New sidings, turntable, and platform at Lienshan for the Junction to Hulutao harbour.

    Bridge No. 248. Training spurs put in to check the erosion of the west bank.

    50 ton weighbridge put in at Shanhaikwan, Chinchow, Kaopantzu, Yingkow, and Hsinminfu.

    30 ton weighbridge transferred to Suichunghsien, Lichiwopu, and Tawa.

    The Hsinminfu station dam has been raised and widened, a clay blanket has been laid for 10,500 feet and 65 spurs have been made with protected ends. Additional protection works were constructed on the main line West of Hsinminfu station, near bridges 53 and 54. The Main Line bank was raised from No. 57 Bridge up to the Liao River bridge, and relaid with new section 60 lb. rails and ballasted. Chuliuh station platforms raised 6 feet, and Hsinminfu 3 feet.

    10 spans have been added to No. 56 bridge, and Nos. 20a, 34a, and 34b bridges have been built, each 4 spans of 10 feet. Additional quarters have been built for staff.

    Formation raised 3 feet from chainage 4,175 to 4,290, 11,500 feet.

    Bridge No. 65 extended 2 spans of 20 feet, and bridge No. 66 extended 3 spans of 20 feet.

    Main line extended to temporary station outside Mukden City wall, and loop from temporary station to South Manchurian Railway boundary, total length added to main line 2.96 miles.

**Foreshore Protection:—**

    Tongku bund reformed and pitched, 680 feet.

    36 fangs rubble used at Yingkow.

**Painting Executed for Maintenance:—**

    Bridges (East of Tongku) Nos. 21, 48, 50 to 60 inclusive, 63, 64, 65, 69, 71, 73 to 87 inclusive, 113 and 5. 7 1/2' culverts.

    Bridges (West of Tongku) Nos. 4, 24, 34 to 41 inclusive and Tungchow Branch 1 to 9 inclusive.

    Peitaiho. Stationmaster's house.

    Anshan. Water tank.

    Changli. Two water tanks.

    Yangminho. One water tank.

Tongku. Part of Engineer's quarters.

Tientsin. Locomotive and Traffic quarters.

Fengtai. Waiting room.

Signals, station name posts, point rodding, sign posts, etc.

The Railway Hotel Shanhaikwan, quarters and station building, Shanhaikwan, Suichunghsien, Ningyuanchow, Koupangtzu, Chuliuh and Yingkow. Overbridges at Shanhaikwan, Chinchow and Koupangtzu. Ferry and pontoons at Yingkow. Lamp posts, whistle boards, milestones, cabins and bridge numbers, etc.

Bridges Nos. 135, 136 and up to and inclusive 149, 152 to 154, 156 and 157 and 161, have been painted.

Bridges Nos. 209 to 223, 228 to 253, and 276 all inclusive have been painted.

**Water Supply Works:—**

Changli. Direct connection made from Yangminho pump, and pipe tapped at Changli, to enable water to be flushed through.

Tientsin. Water column at East end, replaced by a new one, 860 feet pipe laid to supply water to new waiting rooms.

Tientsin City Station. City water laid on to New Administration Offices and to power house.

Yaoyangho. Two tanks increased 4 feet in height.

**Works in Progress:—**

Bridge No. 106 (East of Tongku) Training banks.

Tongshan. Paint shop.

Drying shed.

Changkueichuang. Station building.

Tientsin. Engine shed.

Platform paving.

Waiting room.

Tientsin City Station. Junction signalling (almost finished).

Rice siding. Bridge No. 2. Reconstruction.

Chienmen. Metalling goods yard and road.

Octroi shed.

Post office.

Bridge No. 58. 17 spans of 30 feet.

Mukden. (Fengtien). Station yard earthwork filling.

**Rainfall and Floods:—**

Rainfall Lanchow. 37.49 inches, Tongku 39.63 inches, Fengtai 23.10 inches.

No damage was done by floods due to rainfall in the Inside Wall District, but considerable damage was done to the embankment between Tongku and Peitang by a very high tide and gale on August 30th.

Shanhaikwan—Shahouso Section. No serious damage was done by floods with the exception of No. 175 bridge, the bank of which was badly scoured out on the North West side. This river requires training.

Shahouso—Chinchow Section. No serious damage done by floods, but Bridges Nos. 239, 264 (Niuerho), and 271 (Hsiaolingho) all require more or less heavy training works to stop the erosion of the banks, especially No. 264, which suffered badly.

Chinchow—Kaoshantzu Section. On July 12th the North East training bank of No. 279 bridge was carried away, and the bank slightly damaged behind the East pier of the bridge. The South side wing walls of No. 296 bridge were carried away. A slight washout occurred at Shuanyangtien station.

Koupangtzu—Yingkow Section. On August 12th a heavy storm prevailed, during which 14 inches of rain fell in 40 hours. The overflow of the Liao flooded the plain, and the Railway from Huchiwopu to Tienchuangtai was exposed to floods for the first time since it has been built. The natives attempted to cut the bank near Huchiwopu but owing to the water being nearly level on both sides, the damage was easily repaired. With the exception of gulching and fretting of slopes, no other damage was done to the Railway.



# Rainfall and Floods (continued).

Kaoshantzu—Chuliuh Section. In April owing to the Spring floods, the station dam at Hsinminfu was breached, but traffic was not suspended. In June a rise of 2' 6" occurred in the Liu river, which breached the native dam, North of Hsinminfu and damaged but did not break the Railway dam. On July 9th the Liu water rose to 205.00, the Railway dam which was breached just north of Hsinminfu station. This flood was very trouble-minfu yard, and the tracks disarranged. The river was dammed, and headed off in another direction, and the embankment and tracks were then repaired. Traffic was stopped from 10th to 13th. On July 20th the Liao river rose to 195.30 and flooded the Chuliuh store yard and engineer's offices, and this state of affairs continued more or less to the middle of August, when a heavy rain storm aggravated the situation, and caused a general flood in Liao. The scour through No. 58 bridge was strong, and eventually the training banks were undermined and lost, thus allowing the main line to be breached, behind the West abutment, for 150 feet. The maximum depth of the scour hole was 40 feet from the surface of the water, the only thing that could be done was to fill up the hole with stone and ballast. This was done as rapidly as it could be supplied by all the quarries on the Railway, and traffic was resumed on August 29th. The abutment of the bridge No. 58 disappeared and one girder was lost. A new bridge consisting of seventeen 30 feet spans is being built to replace the old one, three spans of 20 feet, which will be filled up. During this flood, the Railway was threatened by water topping the formation level at Tahushan, and at bridges Nos. 40 and 41 West of Peichipu, and at bridge No. 53 near Hsinminfu.

## The Rainfall registered on different sections as below:—

Shanhaikwan 36<sup>5</sup>/<sub>8</sub>", Ningyuanchou 32<sup>7</sup>/<sub>8</sub>", Koupangtzu 32", Yingkow 37<sup>1</sup>/<sub>4</sub>" and Chuliuh 28". Mukden Rainfall totalled 37 inches, including 12 inches in July and 13 inches in August. The Liaoh reached maximum height on 23rd July and overflowed its banks topping bank to Eastward, for about 2 miles, and breaching it in several places. The largest breach was 100 feet long × 16 feet in depth. Train service was suspended till the morning of the 24th August when it was resumed, passengers being transhipped at the breach. Through traffic was resumed again on the evening of the 27th July. On 12th and 13th August 12" rain fell in 36 hours, caused another flood, practically the whole of line between Liaoh and Mukden being effected. The track was awash in many places and washouts were frequent. One (at Bridge No. 62) extending to a length of 300 feet and 20 others of 30 feet and over, and 70 to 80 of from 5 to 10 feet. In consequence of this, the train service was suspended from 14th to 27th August.

## Shanhaikwan Bridge Works.

The tonnage of work turned out was as follows:—

### Girders:—

18 spans 100 feet clear . . . . .	Tons	655.	9.	1.	6.
11 spans 12 feet clear . . . . .		18.	3.	3.	11.
11 spans 10 feet clear . . . . .		15.	7.	2.	25.
3 spans 21'6" Differdange . . . . .		18.	3.	0.	6.
59 spans 20 feet Differdange . . . . .		195.	1.	1.	6.
30 spans 10 feet Differdange . . . . .		36.	15.	3.	19.
3 spans 13 feet 2 inches . . . . .		10.	15.	3.	25.
1 26 feet girder for Tientsin Head Office Buildings . . . . .		16.	0.	21.	
	Tons	950.	13.	1.	7.

### Special Work, Tanks etc:—

2. 15 feet diameter × 10 feet Water Tanks . . . . .	Tons	9.	19.	1.	18.
1. 13 feet diameter × 10 feet Water Tank . . . . .		3.	17.	2.	4.
1. Single 41 feet clear steel Overbridge with 2.1 in 6 ramps for Kinhan Railway . . . . .		23.	10.	3.	15.
1. Double 41 feet clear steel Overbridge with 3.1 in 6 ramps for Kinhan Railway . . . . .		36.	17.	0.	26.
2. Steel waiting sheds, each 110 feet 3 <sup>3</sup> / <sub>4</sub> inches × 38 feet 6 inches, Tientsin City Station . . . . .		46.	14.	2.	26.
1. Double 69 feet clear steel Overbridge for Tientsin City Station . . . . .		60.	0.	3.	14.
4. 4 feet × 4 feet × 8 feet plate iron Oil Tanks for Koupanztzu Shop . . . . .		3.	2.	3.	4.
3. Plate iron Oil tanks 4 feet × 4 feet × 4 feet for Koupanztzu Shop . . . . .		1.	8.	0.	17.
1. Set Steel Roof Truss 44 feet 4 inches × 13 feet high for Lanchou . . . . .		15.	2.	0.	
	Tons	186.	6.	4.	12.

### Miscellaneous:—

Ironwork to the extent of . . . . .	Tons	73.	4.	3.	0.
TOTAL TONNAGE of Ironwork done . . . . .	Tons	1210.	5.	0.	19.

### Foundry:—

The Foundry has been fully employed upon Railway chairs, Signal gears, Columns, Castings for washout pumps, Points and Crossings, Water cranes, Turntables and Miscellaneous Castings for Maintenance and Construction, to the extent of . . . . . Tons 181. 2. 2. 0.

### Improvement:—

- 1 Pipe, screwing and cutting machine.
- 1 Drilling machine.
- 1 New Smith Forge with pipe for Points and Crossing Shop.
- 1 Old Cold Sawing machine supplied from Tongshan Works.
- 1 Old 38" Blast Fan supplied from Tongshan Works.
- 2 sets New wall Drilling machines.
- 1 New 24" Gap Shearing and Punching machine.



## GENERAL REPORT OF WORK CARRIED OUT BY LOCOMOTIVE AND CARRIAGE WORKS.

### Locomotives.

General overhaul . . . . .	44.
Repaired at Koupangtzu . . . . .	15.
New Locomotive built type 4-6-0 Cylinder 18" × 24" Drivers 5' 6" . . . . .	1.
Locomotives fitted with Westinghouse brake . . . . .	1.
Locomotives fitted with the Westinghouse train heating gear . . . . .	8.
New Boilers constructed for renewals . . . . .	6.
New boilers under construction . . . . .	5.
New fireboxes put in . . . . .	4.
Half sides put in . . . . .	18.
New firebox tube plates . . . . .	11.
New back plates put in . . . . .	7.
New sets of tubes put in . . . . .	23.
Boilers withdrawn from service . . . . .	5.
New tenders built . . . . .	2.
Tenders repaired at Tongshan Works . . . . .	55.
Tenders repaired at Koupangtzu . . . . .	12.

### Steamers.

Ferry boat, s.s. "Liaotung" engines and boilers overhauled.

### Coach and Car Repairs.

	No. of Cars sent in for repairs		
	Freight	Passenger	Brake Vans
At Tongshan Works . . . . .	1802	206	21
At Koupangtzu Works. . . . .	579	46	34
Total . . . . .	2381	252	55

Note:—At the Running Sheds 11,135 minor repairs were effected to Cars, and 25,332 axle boxes were repacked.

### Rolling Stock Completed.

20 Ton Covered Goods . . . . .	50
30 Ton Covered Goods . . . . .	20
30 Ton Oil Tanks . . . . .	8
Third Class Passenger Cars . . . . .	5
Heating and Lighting Car . . . . .	1
Baggage and Brake Vans . . . . .	2
Locomotive No. 53 (type 4-6-0 Cylinders 18" × 24" Drivers 5' 6") . . . . .	1
Tender, 8 wheels . . . . .	2

### Rolling Stock Under Construction.

First Class Sleepers . . . . .	3
Second Class Sleepers . . . . .	1
First Class Buffet . . . . .	1
Drawing Room Cars . . . . .	5
20 Ton Covered Goods . . . . .	50
First Class Corridor Cars . . . . .	5

### Improvement to Rolling Stock.

20 Ton Low Sided converted to 24 ton High Sided . . . . .	3
20 Ton High Sided converted to 24 ton High Sided . . . . .	33
24 Ton Low Sided converted to 24 ton High Sided . . . . .	50
Wagons fitted with coupler locking pin lifting gear . . . . .	269
Wagons fitted with Tarpaulin rings . . . . .	35
Coach frames fitted with new ends, end platforms enclosed, and vestibules fitted . . . . .	3
Number of Coaches fitted with piping for steam heating . . . . .	18
Second Class Coaches fitted with improved seating accommodation . . . . .	3
Second Class Coach fitted with Electric Light . . . . .	1
Coaches fitted with improved buffers . . . . .	50
Telegraph car 92 overhauled and converted to private car. . . . .	

### Rolling Stock Withdrawn From Service.

No. 8 Brake Van condemned.

### Rolling Stock Completed for other Railways.

Kalgan Railway.

22 feet Brake Van . . . . .	1
30 Ton High Sided . . . . .	50

Canton Kowloon Railway.

First Class Passenger Cars . . . . .	4
Second Class Passenger Cars . . . . .	4
Third Class Passenger Cars . . . . .	8
Composite . . . . .	2
Third Class Baggage, Brake, and Mail . . . . .	3
Third Class Baggage and Brake Vans . . . . .	2



**Kirin Railway.**

Four wheel Brake Van . . . . .	1
Eight wheel Brake Van . . . . .	1
Composite . . . . .	4
Third Class Passenger Cars . . . . .	10
30 Ton Covered Goods . . . . .	40
30 Ton High Sided . . . . .	27
30 Ton Low Sided . . . . .	20
Private Car . . . . .	1
Bogie Tenders . . . . .	5
Shunting Engines 2-6-2 type, Cylinders 14" × 20" Drivers 3' 6" . . . . .	2
17" Mogul Engines 2-6-0, Cylinders 17" × 24" Drivers 4' 6" . . . . .	5

**Ichang Railway.**

22 feet Brake Van . . . . .	1
Note:—Brake Van not delivered returned from Hsinho pending instructions.	

**Ping Chao Railway.**

Composite Car . . . . .	1
Third Class Passenger Cars . . . . .	2

**New Construction now in Progress for other Railways.**

**Kirin Railway.**

17" Cylinder Mogul Locomotive 2-6-0 type, 17" × 24" Drivers 4' 6" . . . . .	1
Bogie Tenders . . . . .	1

**Old Rolling Stock Disposed of.**

15 Ton Low Sided Cars . . . . .	25
Locomotives . . . . .	4
Tender . . . . .	1

**Varnishing and Painting.**

Locomotives . . . . .	33
Tenders . . . . .	24
Coaches . . . . .	106
Brake Vans . . . . .	12
Freight . . . . .	1183

**Foundry.**

Iron Castings . . . . .	638 Tons.
Brass Castings . . . . .	63.5 "

**Average Number of Employees.**

Tongshan Works . . . . .	2,190
Koupangtzu Works . . . . .	291
Locomotive Sheds . . . . .	1,571
Total . . . . .	3,998

**Rolling Stock Equipment at 31st December 1911.**

	No. of Vehicles	Tonnage.
<b>Freight Stock.</b>		
<b>10 Ton Capacity:—</b>		
Powder Vans . . . . .	6	60
Coal Cars . . . . .	271	2710
Water Tanks . . . . .	7	70
Pig Cars . . . . .	7	70
<b>12 Ton Capacity:—</b>		
Coal Cars . . . . .	471	5652
<b>15 Ton Capacity:—</b>		
Ballast Cars . . . . .	29	435
<b>20 Ton Capacity:—</b>		
Flat Cars . . . . .	74	1480
Ballast Cars . . . . .	258	5160
High Sided . . . . .	824	16480
Pony . . . . .	43	860
Covered Goods . . . . .	58	1160
<b>24 Ton Capacity:—</b>		
Flat Cars . . . . .	1	24
Ballast . . . . .	16	384
High Sided . . . . .	134	3216
<b>30 Ton Capacity:—</b>		
Ballast . . . . .	38	1140
High Sided . . . . .	411	12330
Covered Goods . . . . .	166	4980
Water Tanks . . . . .	3	90
Oil Tanks . . . . .	49	1470
Timber . . . . .	2	60
<b>Passenger Stock.</b>		
Imperial . . . . .	3	12
State . . . . .	3	12
Private . . . . .	14	44
Directors . . . . .	1	4
1st Class . . . . .	24	96
2nd Class . . . . .	38	152
3rd Class . . . . .	100	400
Composites . . . . .	17	68
Ordinary Buffet . . . . .	7	28
Kitchen . . . . .	1	4
1st Class Buffet . . . . .	2	8
2nd Class Buffet . . . . .	2	8
1st Class Sleepers . . . . .	2	8
2nd Class Sleepers . . . . .	2	8
1st Class Saloon . . . . .	2	8
2nd Class Saloon . . . . .	2	8
Heating and Lighting . . . . .	4	16
Baggage and Brake . . . . .	5	20
<b>Brake Vans.</b>		
4 Wheel . . . . .	50	100
8 Wheel . . . . .	15	64
<b>Miscellaneous.</b>		
Wrecking Cars . . . . .	9	—



### Engines.

Passenger Class :—

4-4-0	Cylinder	17" × 24"	4	
4-4-0	Cylinder	19" × 24"	3	
4-6-0	Cylinder	18" × 24"	13	20

Freight :—

2-6-0	Cylinder	17" × 24"	44	
2-6-0	Cylinder	19" × 24"	14	
2-6-0	Cylinder	16" × 24"	27	85

Shunters :—

2-6-2	Cylinder	14" × 24"	13	
0-6-0	Cylinder	16" × 24"	4	
2-6-4	Cylinder	17" × 24"	2	19

Total Engines 127

### Tenders.

4 Wheel . . . . .	3
6 Wheel . . . . .	26
8 Wheel Bogie . . . . .	86

Total Tenders 114

### Comparative Table of Rolling Stock.

	1910	1911
Passenger Cars and Brake Vans . . . . .	287	294
No. of Axles . . . . .	1036	1068
Freight Cars of all Classes . . . . .	2814	2868
Tonnage Capacity . . . . .	56198	57813
Locomotives of all Classes . . . . .	127	124
Weight in Tons . . . . .	5745	5667

Note :— One Freight Car added to list hitherto not on register.

### New Machinery Erected.

Locomotive and Car Works :—

Steam driven log frame saw, for logs up to 36" × 30" . . . . .	1.
Panel planing machine to plane 30" × 6" . . . . .	1.
10" Gap lathes . . . . .	2.
"Bellis & Morcom" Steam engine direct coupled to Crompton generator. . . . .	1.
New Vertical boiler, 12'0" × 4'9" diameter for Koupangtzu Shops . . . . .	1.

### New Buildings and Repairs.

Paint Shop extension of 180 feet in progress.  
 Timber drying shed 100 feet × 40 feet being put up in Car Works.  
 Extra rooms added to Locomotive Accountant, Machine Shop, and Erecting Shop Foremen's houses.  
 Locomotive Works Boiler Shop and hydraulic power house fitted with Electric light.  
 Shops generally white washed and kept in repair.  
 Offices colour washed.  
 Scrap furnace added to Locomotive Works Smith Shop.

### Miscellaneous Outside Orders.

Vertical boiler 8'9" × 3'6" constructed for Tungpu Railway.  
 Various Castings for Cement Works, Lanchow Mining Company and other Railways.

### TRAFFIC DEPARTMENT.

Train miles run for Revenue . . . . .	2,057,276
Train miles run for Construction and Maintenance . . . . .	74,234
	2,131,510

Number of Passengers carried . . . . .	2,974,863
Number of Tons of Freight carried . . . . .	3,189,410

Passenger Mileage . . . . .	217,785,085
Ton Mileage . . . . .	294,633,589

Total "Passenger Ton" Mileage . . . . . 512,418,674

Average number of men employed by Traffic Department }  
 including Military Police about 1560. . . . . 2,676



## TELEGRAPH DEPARTMENT.

### Length of Wires.

Tungchow and Tungchow Junction . . . . .	Miles.
Chienmen and Yingkow Wires (Double Wires). . . . .	16.65
Koupangtzu and Fengtien (Double Wires) . . . . .	1043.50
Hsinminfu and Fengtien (Single Wire) . . . . .	214.50
Tientsin City and Hsiku . . . . .	37.37
Tientsin Central and Tientsin East (Six Wires) . . . . .	4.00
Tientsin and Tongku (Telephone Wire) . . . . .	16.26
Fengtai and Lookouchiao . . . . .	27.00
	3.85
	<u>Miles 1363.13</u>

### Electric Staff Wires.

Chienmen and Fengtien and Yingkow . . . . .	Miles 521.75
Number of Messages sent, Service . . . . .	<u>218,413</u>
Number of Messages sent, Outside . . . . .	4,877
	<u>Total 223,290</u>
Average Number of Employees . . . . .	335
Number of Telegraph Stations . . . . .	77
Number of Recorders in use . . . . .	118
Number of Electric Staff Stations . . . . .	70
Number of Electric Staff and Tablet Apparatus . . . . .	138

During the year, Telephones have been installed in many of the Principal Stations between Signal Cabins.



### **Note re: Annual Report for the PMR for the Year ended December 1911**

The typed note which follows was found inserted within this copy of the report which had originally belonged to the railway's Chief Engineer C. W. Kinder ( 金达 ) who had retired in 1909. Although not signed, Kinder is almost certainly the author of this typed note.

The PMR was formerly known as Imperial Railways of North China prior to the revolution and the overthrow of the Qing government. A large batch of Kinder's personal papers and photographs has survived and is retained by his descendants. These were catalogued by the undersigned and may be viewed as part of the P. A. Crush Chinese Railway Collection. However, 16 boxes of additional less valuable documents consisting of correspondence record books with carbon copies of letters and railway material requisitions etc. were deposited, almost certainly by Kinder's son, at the Manchester Rylands Library sometime during the 1950s. Among these were a few printed official Peking-Mukden Railway Annual Reports covering the years 1909 -1915.

Some copies of annual reports ( for the period 1920's-1930's) for the PMR/PNR could also be seen ( in 2000 ) within the Jardines Mattheson & the British & Chinese Corporation ( BCC) archives which were retained in 100-plus boxes at the University of Cambridge Library. At this time discussions were in progress on to whether to relocate the BCCC part of this holding to the HSBC archives . The eventual outcome of these discussions and the current location of the BCC records is unknown by the undersigned.

P. A. Crush

( 柯睿思 )

24.09.2024



Memorandum on steel fireboxes.

My experience in China of the life of steel fire boxes has been on an average of 5 years.

After about 2 to 3 years in service its necessary in general to have large repairs done to them as follows: New half sides, fire box, tube plate, stays renewed, a new set of tubes, & probably a new back plate to fire box owing to the following defects that occur. Plate cracking from stay holes in sides, tube plate, & on occasion, in back plate flanges. Cracking in tube & back plate from rivet holes, plate growing in water ways in line with foundation ring, plate. Pitting between stays & in the roots of flanges of tube & back plates in water ways. Fire box stays frequently breaking in all 4 top corners & top rows of back & tube plate.

After fire box has been repaired as stated above, put in service for another term of from about 2 to 3 years its generally necessary to renew fire box on account of pitting of plate in water ways, & the washing away of crown stays.